

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
4 July 2002 (04.07.2002)

PCT

(10) International Publication Number  
WO 02/051242 A1

(51) International Patent Classification<sup>7</sup>: A01K 13/00

(81) Designated States (national): AE, AG, AT, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(21) International Application Number: PCT/KR01/02225

(22) International Filing Date:  
20 December 2001 (20.12.2001)

(25) Filing Language:

English

(84) Designated States (regional): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SI, TR).

(30) Priority Data:  
2000/36223 22 December 2000 (22.12.2000) KR

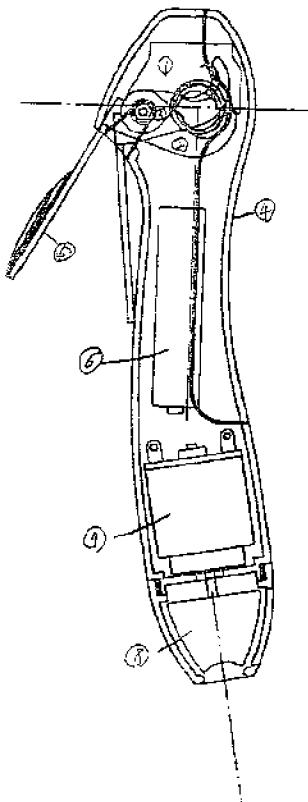
Published:  
with international search report

(71) Applicant and

(72) Inventor: KANG, Sungboon [KR/KR]; # 378-5, Samsan-dong, Boopyung-gu, Incheon-city 403-090 (KR).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SAFETY NAIL CLIPPER FOR PETS



- (1) Upper shearing edge
- (2) Lower shearing edge
- (3) Shaft
- (4) Battery cap
- (5) Cutter handle
- (6) Battery
- (7) Motor
- (8) Ceramic ball

(57) Abstract: Disclosed is a safety claw clipper for pets capable of achieving a safe clipping operation for a claw without any injury to blood vessels close to the claw and a polishing operation for sharp claw edges formed after the clipping operating, using an electrically-driven ceramic ball, in order to prevent the user from being scratched or injured by his pet. An adjusting bolt is mounted to a claw body in order to adjust the length of a claw to be cut. A pair of shearing edges defining a claw insertion gap therebetween at one end of the body. The shearing edges has a cutting mechanism with combined advantages of a scissors type cutting mechanism and a clipper type cutting mechanism so that the user can clip the claw with a reduced force. A ceramic ball exhibiting low abrasion characteristics is coupled to a super-miniature motor mounted in the claw body. When a power switch is switched on to drive the motor, the ceramic ball is rotated at high speed. In accordance with the rotation of the ceramic ball, the edge of the claw is polished. Thus, the claw is rendered to have a round edge. The drive force for the electrically-driven ceramic ball rotating at high speed is supplied from a dry battery or chargeable battery.

WO 02/051242 A1

## SAFETY NAIL CLIPPER FOR PETS

### BACKGROUND OF THE INVENTION

5

#### Field of the Invention

The present invention relates to a claw clipper for clipping claws of pets, and more particularly to a safety claw clipper for pets having diverse functions capable of achieving a safe and convenient clipping operation distinguishable 10 from those of conventional products.

#### Description of the Related Art

Conventional claw clippers basically have the form of scissors. Such a 15 conventional claw clipper is configured such that, in use, the user simply cuts the claw after macroscopically estimating the length of the claw to be cut. Since the claw clipper obscures at least a portion of the claw being cut, it may undesirably lead to clipping at unwanted points and even injury to the pet whose claws are being clipped. Furthermore, blood vessels close to the end of the 20 claw may be cut or ruptured, thereby resulting in unwanted bleeding. However, there is no claw clipper for pets capable of solving such problems. In order to solve the problems involved with conventional claw clippers, the present invention provides a useful claw clipper for pets in which automatic 25 functions implemented using an electric motor are incorporated, thereby being capable of completely eliminating inconvenience and uneasiness in clipping operations.

## SUMMARY OF THE INVENTION

Therefore, a primary object of the invention is to provide a safety claw clipper for pets including an adjusting bolt for adjusting the length of a claw to be cut, shearing edges having a hard and sharp structure not rendered to be blunt even after repeated use, and a ceramic ball having a filing function to polish sharp claw edges formed after the clipping of the claw, those elements being designed and assembled together to form a useful and convenient structure.

10

Another object of the invention is to provide a safety claw clipper for pets capable of collecting claw fragments formed after the clipping of a claw without causing those claw fragments to fly.

15

20

25

## BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a view illustrating the internal configuration of a safety claw clipper for pets according to the present invention;

5 Fig. 2 is a view illustrating the internal configuration of the safety claw clipper, along with an adjusting bolt;

Fig. 3 is a view illustrating the side portion of the safety claw clipper where the adjusting bolt is arranged opposite to a claw insertion gap; and

10 Fig. 4 is a view illustrating the side portion of the safety claw clipper where the claw insertion gap is arranged opposite to the claw insertion gap, along with a plan view.

15

20

25

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to Figs. 1 to 4, a safety claw for pets according to the present invention is illustrated, respectively. The safety claw includes a body, a pair of shearing edges defining a claw insertion gap there between, and an adjusting bolt threadedly coupled to the body behind the gap and adapted to adjust the portion of a claw inserted into the gap, that is, the portion of the claw to be cut. In use, the user first adjusts the cutting length by manipulating the adjusting bolt, and then inserts a claw, to be cut, into the claw insertion gap. In this state, the user conducts a clipping operation by moving the shearing edges toward each other. Claw fragments formed in accordance with the clipping operation are collected in a space defined in a battery cap mounted at a rear portion of the body and adapted for a collecting box. A polishing operation is then conducted to polish sharp claw edges formed after the clipping operation. For this polishing operation, the user first forces a sharp claw edge to come into contact with the side or top surface of a ceramic ball rotatably mounted to the rear end of the body, and then switches on a power switch. When the power switch is switched on, electric power from a battery received in the battery cap is supplied to a super-miniature motor coupled to the ceramic ball, thereby causing the super-miniature motor to drive. As the super-miniature motor drives, it rotates the ceramic ball at high speed. Thus, the sharp claw edge contacting the ceramic ball is polished.

As mentioned above, conventional claw clippers involve problems in that those claw clippers obscure at least a portion of the claw being cut, thereby causing clipping at unwanted points and even injury to the pet whose claws are being clipped. For this reason, blood vessels close to the end of the claw may be cut or ruptured even when the user conducts the clipping operation with

great care, thereby resulting in unwanted bleeding. In the safety claw clipper of the present invention, however, there is no possibility that blood vessels close to the end of the claw may be cut or ruptured, thereby resulting in unwanted bleeding, because a desired cutting length of the claw, which may be 5 1 mm or 2 mm, can be set using the adjusting bolt. Furthermore, conventional claw clippers have no means for polishing sharp claw edges formed after the clipping operation. Where a pet has such sharp claw edges, persons may be scratched by the pet when the pet jumps at them while rejoicing to see them. In particular, sharp claw edges formed after the clipping operation can be 10 rapidly polished using the electrically-driven ceramic ball, in accordance with the present invention. By virtue of the electrically-driven ceramic ball, it is possible to greatly reduce the polishing time, as compared to conventional cases using a simple stainless steel file. The reduction in polishing time also provides an additional advantage in that the time for the pet to be held for the 15 polishing task is correspondingly reduced, thereby resulting in a reduction in the stress of the pet caused by the holding. Also, there is no possibility that the user is injured by the pet during the clipping and polishing operations. In addition, claw fragments formed after the clipping of a claw are collected in the claw clipper without flying. Accordingly, it is unnecessary for the user to worry about contamination of the surroundings resulting from flying claw 20 fragments. However, the most important effect of the present invention is provided in that it is possible to achieve a simple and safe grooming for pets while minimizing the possibility that the user is scratched or injured by his pet.

## WHAT IS CLAIMED IS:

1. A safety claw clipper for pets comprising:

a body;

5 a pair of shearing edges defining a claw insertion gap therebetween at one end of the body, the shearing edges having a cutting mechanism with combined advantages of a scissors type cutting mechanism and a clipper type cutting mechanism;

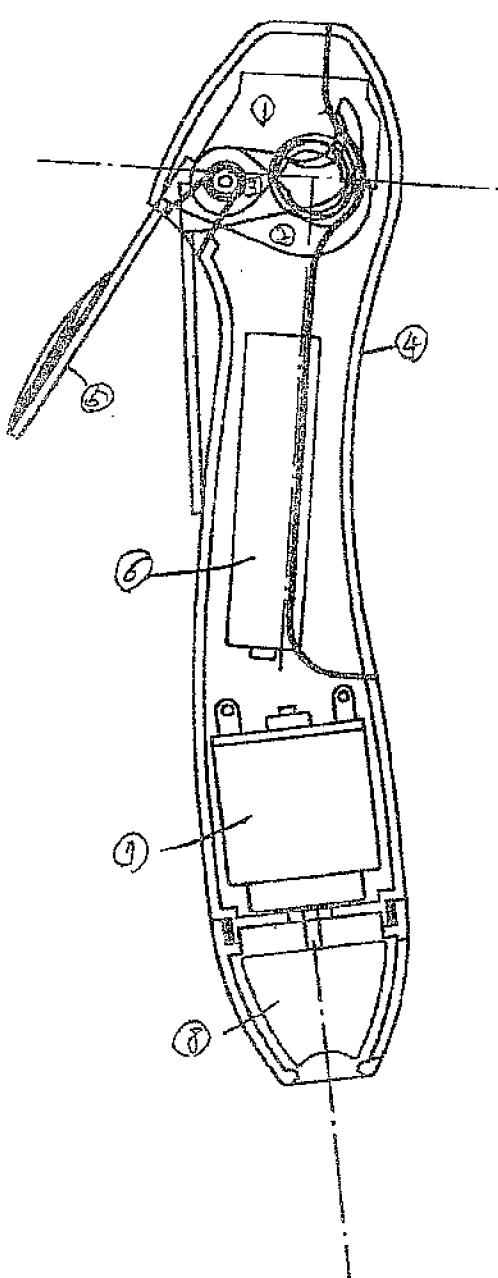
10 an adjusting bolt threadedly coupled to the body behind the gap and adapted to adjust the portion of a claw to be inserted into the gap for cutting thereof;

an electric motor mounted in the body;

15 an electrically-driven ceramic ball rotatably mounted to the other end of the body and adapted to polish sharp claw edges formed in accordance with a clipping operation for the claw; and

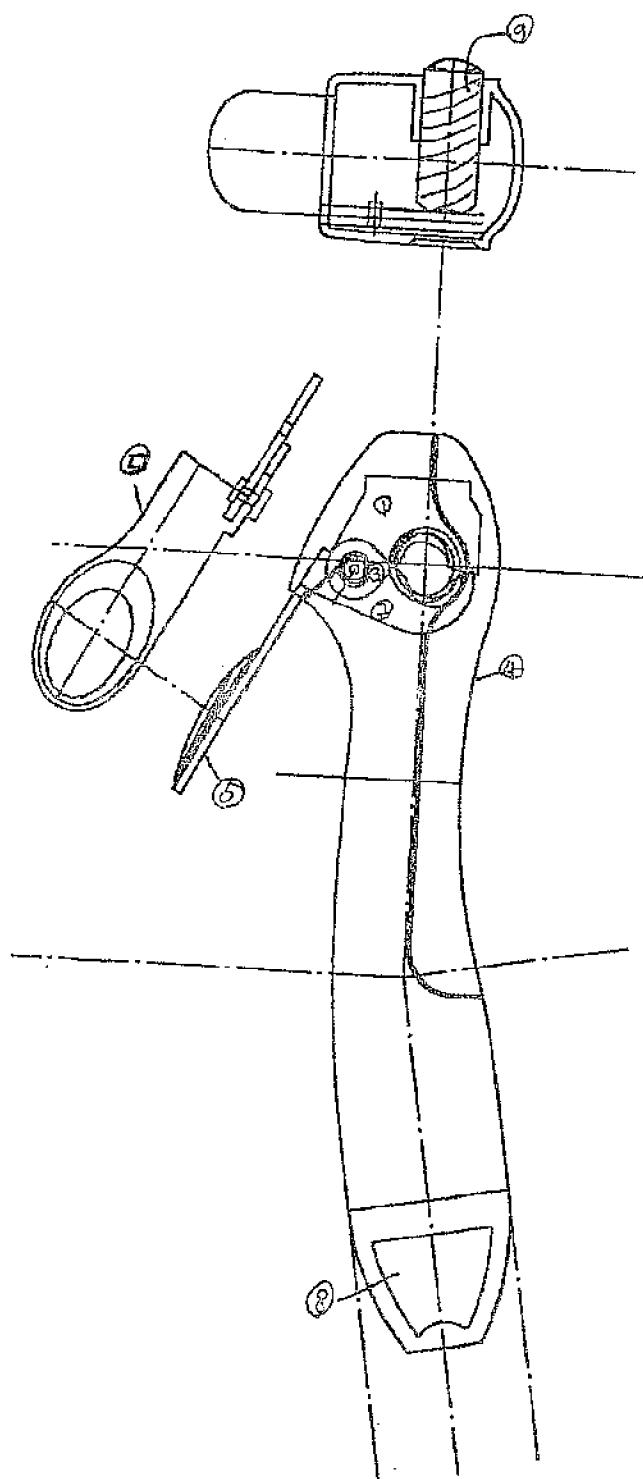
a collecting box separably mounted in the body and adapted to collect claw fragments formed during the clipping operation.

Fig. 1



- (1) Upper shearing edge
- (2) Lower shearing edge
- (3) Shaft
- (4) Battery cap
- (5) Cutter handle
- (6) Battery
- (7) Motor
- (8) Ceramic ball

Fig. 2



- (1) Upper shearing edge
- (2) Lower shearing edge
- (3) Shaft
- (4) Battery cap
- (5) Cutter handle
- (6) Battery
- (7) Motor
- (8) Ceramic ball
- (9) Adjusting bolt

Fig. 3

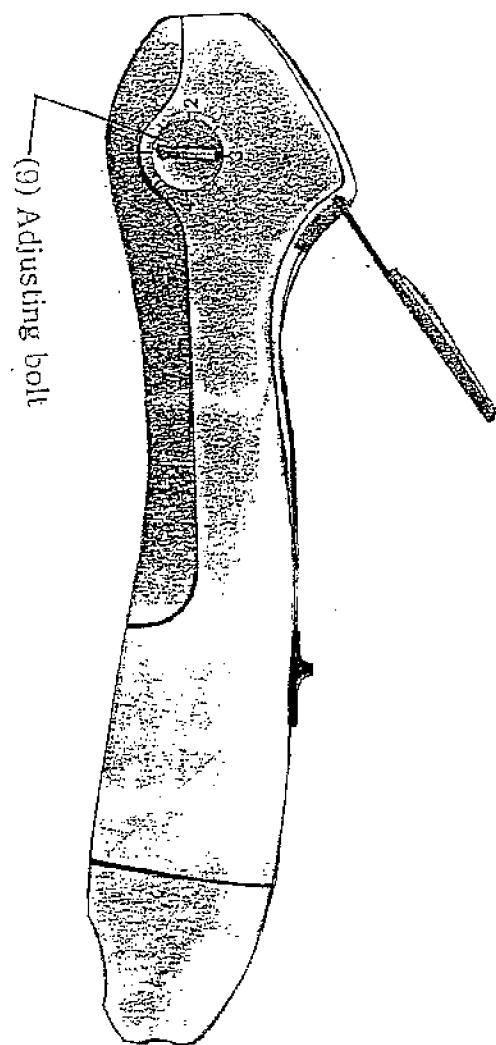
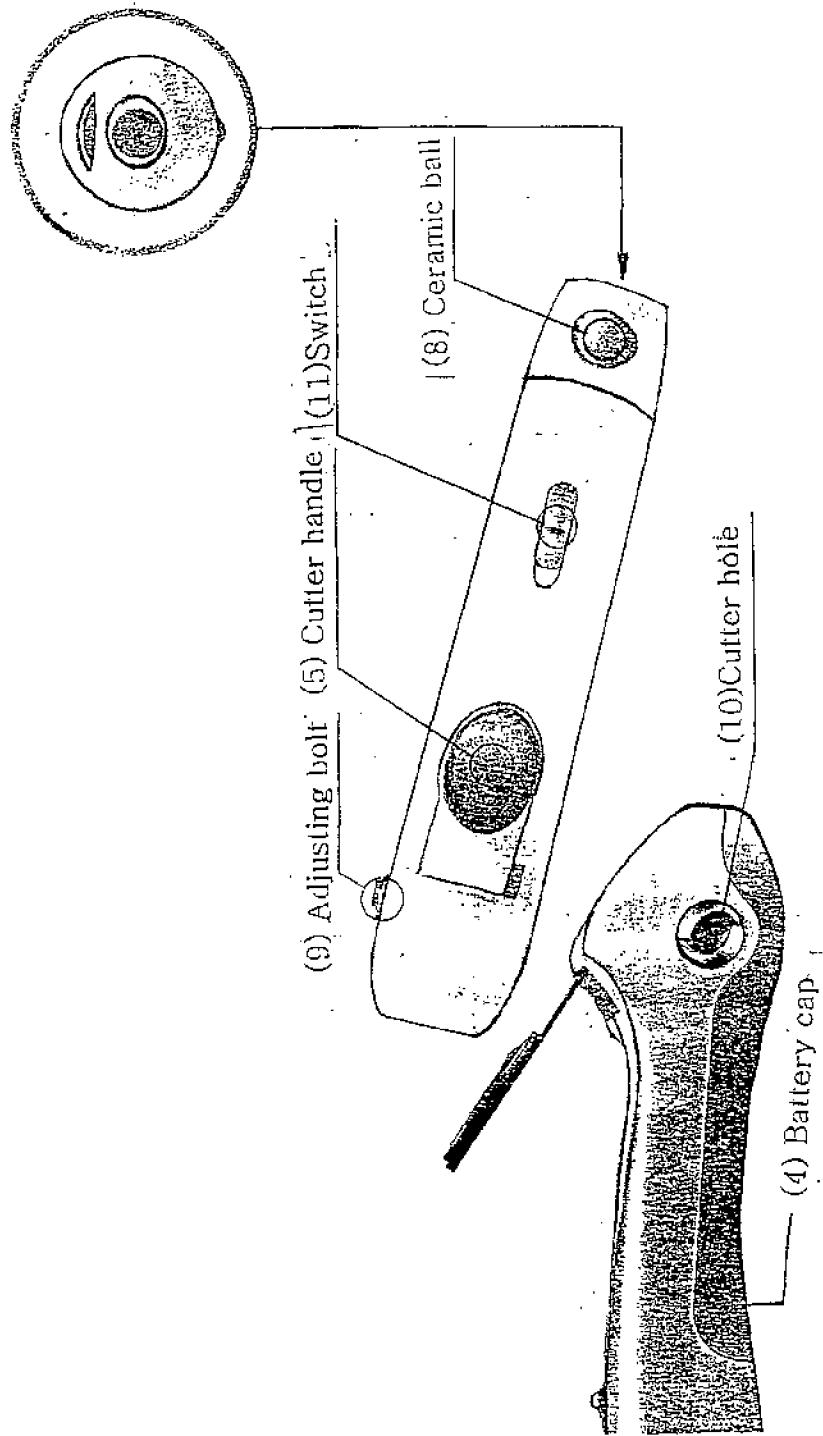


Fig. 4



## INTERNATIONAL SEARCH REPORT

international application No.

PCT/KR01/02225

**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 A01K 13/00**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

A01K 13/00, A45D 29/02, 29/05, 29/11, B23D 71/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Patents and applications for inventions since 1975, Korean Utility models and applications for Utility models since 1975 and Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

KIPASS

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,819,757 A (Baekkelund) Oct. 13, 1998 see the entire document	1
A	JP62-198959 U (Hayashi Ltd. Co.) Dec. 18, 1987 see the entire document	1
A	KR1998-019284 U (Baeck, Moo-hoon) Jul. 6, 1998 see the entire document	1
T	KR 217603 Y1(Park, Jin-woo) Jan. 10, 2001 see the entire document	1

 Further documents are listed in the continuation of Box C. See patent family annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

17 APRIL 2002 (17.04.2002)

Date of mailing of the international search report

17 APRIL 2002 (17.04.2002)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office  
 Government Complex-Daejeon, 920 Dunsan-dong, Seo-gu,  
 Daejeon Metropolitan City 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

KIM, Tae San

Telephone No. 82-42-481-5633



**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

PCT/KR01/02225

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5,819,757A	Oct. 13, 1998	none	
JP62-198959 U	Dec. 18, 1987	none	
KR1998-019284 U	Jul. 6, 1998	none	
KR 217603 Y1	Jan. 10, 2001	none	